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Angus Campbell

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EXAMINER

HOBBS, MICHAEL L

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,855	Applicant(s) CAMPBELL, ANGUS	
	Examiner MICHAEL HOBBS	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 66-71, 73-90 and 92-157 is/are pending in the application.
- 4a) Of the above claim(s) 106-152 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 66-71, 73-90, 92-105 and 153-157 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/21/2009 has been entered.

Preliminary Remarks

2. Applicant's amendment overcomes the 35 USC 112 second paragraph rejection in paragraph 5 of the Office Action mailed on 03/19/2009. Applicant's amendment overcomes the 35 USC 103(a) rejection in paragraphs 10, 15, 18, 22, 29, 35 and 40 of the Office Action mailed on 03/19/2009.
3. Claims 66-71, 73-90, 92-105 and 153-157 are pending further examination upon the merits.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The

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abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because the abstract is more than 150 words in length and used the legal phraseology "said" in line 12. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 66, 68, 73-79, 81, 83-86, 88, 89, 90, 92-97, 104 and 153-157 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included).

9. Franzen discloses a method and machine for decomposing compostable waste that discloses the following limitations for claim 66:

“An apparatus for aerobically composting waste material in an aerated composting process, “: Franzen discloses a composting machine that includes vessel (vessel 10) for receiving the waste (page 2 lines 26-27) and provides a continuous supply of air to the waste in order to maintain and promote the biological decaying process or composting within the vessel (page 2 lines 1-3). Therefore, the composting machine meets the intended use of the instant application.

“an enclosed vessel comprising a first end wall, a second, opposing end wall and side wall(s) defining an interior vessel space;”: The composting machine of Franzen includes the vessel (vessel 10) as discussed above where this vessel has a curved side wall (wall 11) , a top wall (wall 12) and a bottom wall (wall 13; page 2 lines 28-29).

“a rotatable shaft located within said vessel space; “: Within the interior of the vessel (vessel (10) is a hollow shaft (shaft 16) that extends axially through the center of the vessel and is rotatably mounted in the vessel on a spherical ball bearing (bearing 17) on the lower side of the bottom wall (wall 13) and to a spherical ball bearing (bearing 18) on the upper side of the top wall (wall 12; page 2 line 31 - page 3 line 2).

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“a drive means operatively connected to said rotatable shaft for driving said shaft:

“: Further, an electric drive motor (motor 20) is connected to the shaft (shaft 16) via a gear (gear 21; page 3 lines 2 & 3).

“size reduction means for reducing the size of waste material introduced to the vessel; “: The interior of the vessel includes six wings (wings 22-27) that are mounted onto the shaft and are attached to the shaft by a screw connection (connection 29; page 3 lines 4-6 & 10-11). Also, a number of stationary agitators (agitators 39) are mounted on the sidewall (wall 11) and project radially from the inside surface and into the vessel and is located above the rotating wings (vessel 10; page 4 lines 12-15). The wings and agitators co-operate in order to prevent the formation of lumps and clods within the vessel and can therefore "shred" the compost (page 6 lines 10-14).

“wherein said size reduction means divides the interior vessel space into first and second regions and defines a zone of size reduction through which waste material must pass as it passes through the vessel;”: As can be seen from Figure 1 of Franzen, the wings and agitators divide the interior of the vessel into “zones”.

“said size reduction means comprising one or more cantilevered bars, blades or cutting plates rigidly mounted on said rotatable shaft and rotatable with said shaft, and one or more fixed bars, blades or cutting plates mounted on and extending from said side wall(s), “: As discussed, the wings or blades are

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mounted on the rotatable shaft and includes agitators or fixed bars that extend from the sidewall.

“wherein said rotatable and fixed bars, blades or cutting plates overlap and co-operate together to create a shearing action so as to reduce the size of the waste material as said waste material passes through said size reduction means;”:

Also, from Figure 1, the wings and agitators overlap and do co-operate to break up clumps within the vessel. Furthermore, the wings and agitators are fully capable of creating a shearing action within the vessel.

“a loading port through which waste material may be introduced to said first region of the vessel;”: Franzen discloses an inlet unit (unit 44) with a lid (lid 46) that is connected to the inlet opening (inlet 43; page 4 lines 23-26).

“a discharge port through which waste material may be removed from the second region of the vessel;”: Franzen further includes a discharge pipe (pipe 68) or port allows for the removal of the waste which has since been converted to humus (page 7 lines 22-26).

“a source of oxygen for maintaining conditions within said vessel suitable for the aerobic composting of said waste material;”: Further, a fan (fan 32) is used to take in air from the surroundings and supplies this air under pressure to the shaft (shaft 16) where the shaft delivers this air to the nozzles (nozzles 30) at the bottom of the vessel (page 3 lines 27-28 and page 4 lines 5-7).

“wherein, when the apparatus is in use, waste material introduced to said vessel moves from said first region through the size reduction means to said second

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region.”: Finally, the composted waste within the vessel of Franzen moves from the inlet and past the wings and agitators to the outlet pipe and therefore, Franzen meets this limitation.

However, Franzen differs from claim 66 in that the wings attached to the rotating shaft are not blades.

10. Peguy discloses a mill used to crush and mix domestic garbage that includes for claim 66 movable knives (knives 14) that are mounted to a rotating shaft (shaft 3) that are teamed with parallel knives (knives 19) within the interior of the mill. During operation, the movable blades rotate and material is introduced into the interior by a chute (chute 18). The material is struck by the movable knives (knives 14) and sheared by the fixed knives (knives 19; paragraph 21 of translation). This serves to mix and crush the organic material.

11. Peguy demonstrates that using the combination of movable and fixed blades to shear compost was an art recognized means for achieving this goal at the time of the instant application. Further, it would have been obvious for one of ordinary skill in the art to employ the blades suggested by Peguy within the compostor of Franzen in order to obtain the predictable result of mixing and crushing or grinding the compost. The suggestion for doing so at the time would have been in order to transform domestic garbage into humus or compost (paragraph 4 of translation).

12. With regards to the limitation of claim 68 where *“said side wall(s) and/or said end walls are insulated so as to retain heat generated by aerobic composting of introduced waste material”*, Franzen discloses insulating the vessel with a heat insulation

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(insulation 15) in order to reduce the formation of condensate on the inside surfaces of the vessel (page 7 lines 16-19).

13. Regarding the limitation of claim 73, where "*at least one of the rotatable bars, blades or cutting plates rotates for a portion of its rotation directly past and adjacent to said fixed bars, blades or cutting plates*", as discussed above, the wings or blades of Franzen rotate past the stationary agitators and therefore, a "portion of [the wing's] rotation" is "directly past and adjacent to said fixed bars" (Fig. 1).

14. Regarding the limitation of claim 74 where "*at least one of the rotatable bars, blades or cutting plates rotates for a portion of its rotation within a parallel space between two of said fixed bars, blades or cutting plates*", Figure 1 of Franzen shows at least one of the wings rotating between two of the stationary agitators.

15. For claim 75 where "*one or more of said fixed and moving bars, blades or cutting plates include a plurality of teeth*", the bottom wings of Franzen include blades (blades 62) or teeth for enhancing the agitation of the compost (page 6 lines 16-18).

16. For claims 76 and 77, Franzen and Peguy are silent regarding the spacing between the two bars. However, it is within the skills of one of ordinary skill in the art to modify the distance between the bars in order to optimize mixing and aeration of the compost. It would be obvious to one of ordinary skill in the art to adjust the bar spacing in order to optimize the mixing and grinding of the compost of the result effective variable in this known process, consult *In re Boesh and Slaney* (205 USPW 215 (CCPA 1980)).

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17. With regards to claim 78 and 79, Franzen and Peguy do not specifically state that the bars are similar widths or the specific width. However, it is within the skills of one of ordinary skill in the art to optimize the width of the bars to promote finer granulation of the garbage within the bioreactor. Therefore, it would be obvious to modify the blades of Franzen and Peguy in order to decrease the amount of time needed to grind the garbage of the compost of the result effective variable in this known process, consult In re Boesh and Slaney (205 USPW 215 (CCPA 1980)).

18. For claims 81 and 83, Franzen discloses the discharge port is at the top end of the compostor and the inlet is at the bottom.

19. For claims 81 and 83, Peguy discloses that the inlet (chute 18) or loading port is at the top of the compostor and that the discharge port (Fig. 1; paragraph 21 of machine translation). Barring any alleged unexpected results, the orientation of the loading port and discharge port either being at the top or bottom of the compostor is merely rearrangement of parts since the positioning of the openings would not modify the operation of the device (see also MPEP 2144.04 VI (C)). Therefore, it would have been obvious for one of ordinary skill in the art to employ the loading and discharge ports suggested by Peguy with the compostor of Franzen in order to obtain the predictable result of loading and unloading the composted material.

20. Regarding the limitation of claims 84 and 85 where “*one end of said rotatable shaft is mounted on or near one end wall, and the opposing end of said rotatable shaft is mounted on or near the opposing end wall*” and the “*rotatable shaft is located centrally within the vessel*”, Franzen meets these limitations as discussed in claim 66.

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Specifically, Franzen discloses that the interior of the vessel (vessel 10) contains a hollow shaft (shaft 16) that extends axially through the center of the vessel and is rotatably mounted in the vessel on a spherical ball bearing (bearing 17) on the lower side of the bottom wall (wall 13) and to a spherical ball bearing (bearing 18) on the upper side of the top wall (wall 12; page 2 line 31 - page 3 line 2).

21. For the limitation of claim 86 where the “*rotatable shaft rotates at a speed less than 60 rpm*”, Franzen further discloses that the shaft rotates at a speed of 2 to 6 rpm by the motor (motor 20; page 5 lines 23-24).

22. For claim 88, Franzen discloses a single motor (motor 20).

23. Regarding the limitation of claim 89, as discussed above, Franzen discloses a single motor (motor 20) for rotating the shaft (shaft 16).

24. With regards to the limitation of claim 90, Franzen discloses that one of the wings (interpreted as being the distribution bar) includes baffles (baffle 60) has a trailing edge that forms a scraper that positioned close to the inside surface of the side wall (wall 11; page 5 line 31-page 6 line 4) and this baffle is fully capable of scrapping accumulated waste from the side walls (i.e. assistance in loading) and assisting the loaded materials into the size reduction zones.

25. For claim 92, Franzen further includes a tubular paddle (paddle 72) that is mounted on the shaft at the same level (level 67) as the discharge pipe (pipe 68) in order to move the humus to the discharge pipe (page 7 lines 31-35). Also, for purposes of examination, the paddle (paddle 71) of Franzen is being interpreted as the sweeper bars of the instant application.

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26. With regards to the limitation of claim 93 where the bars are “*shaped so as to draw material away from said side wall(s) of the vessel*”, Franzen discloses that one of the wings includes baffles (baffle 60) has a trailing edge that forms a scrapper that positioned close to the inside surface of the side wall (wall 11; page 5 line 31-page 6 line 4) and this baffle is fully capable of scrapping accumulated waste from the side walls.

27. For claim 94, the wings of Franzen are fully capable of rotating in either a clockwise or a counter-clockwise direction and from Figure 3, the wing used to draw material away from the wall has an asymmetric shape.

28. For claim 95, a suction fan (fan 63) is used to evacuate humid air and odors from the interior of the vessel by maintaining a negative pressure (page 7 lines 9-15) and when this fan is in operation, the flap (flap 69) is closed. In order to open the flap, the suction fan is stopped in order to break the negative pressure and allow the discharge of material from the discharge pipe (pipe 68; page 8 lines 1-7). Therefore, the flap (flap 69) is fully capable of forming a watertight and airtight seal.

29. With regards to the hatch or cover of the loading port in claim 96, the lid (lid 46) of Franzen is fully capable of forming a watertight and airtight seal.

30. For claim 97, Franzen further discloses a “*source of oxygen*” supplied by a fan (fan 32) that forces the air down the hollow shaft (shaft 16) and out through a set of nozzles (nozzles 30) at the bottom of the composter. The nozzles provide air that passes upwards through the waste body and contacts the waste particles in order to

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maintain the micro-biological process within the vessel in order to decompose the waste (page 6 lines 22-29).

31. For claim 104, Franzen discloses an air outlet (outlet 65) located at the top of the composter (page 7 lines 9-14).

32. Franzen discloses a method and machine for decomposing compostable waste that discloses the following limitations for claim 154:

“An apparatus for aerobically composting waste material in an aerated composting process, “: Franzen discloses a composting machine that includes vessel (vessel 10) for receiving the waste (page 2 lines 26-27) and provides a continuous supply of air to the waste in order to maintain and promote the biological decaying process or composting within the vessel (page 2 lines 1-3). Therefore, the composting machine meets the intended use of the instant application.

“an enclosed vessel comprising a first end wall, a second, opposing end wall and side wall(s) defining an interior vessel space;”: The composting machine of Franzen includes the vessel (vessel 10) as discussed above where this vessel has a curved side wall (wall 11) , a top wall (wall 12) and a bottom wall (wall 13; page 2 lines 28-29).

“a rotatable shaft located within said vessel space; “: Within the interior of the vessel (vessel (10) is a hollow shaft (shaft 16) that extends axially through the center of the vessel and is rotatably mounted in the vessel on a spherical ball bearing (bearing 17) on the lower side of the bottom wall (wall 13) and to a

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spherical ball bearing (bearing 18) on the upper side of the top wall (wall 12; page 2 line 31 - page 3 line 2).

“a drive means operatively connected to said rotatable shaft for driving said shaft:

“: Further, an electric drive motor (motor 20) is connected to the shaft (shaft 16) via a gear (gear 21; page 3 lines 2 & 3).

“size reduction means for reducing the size of waste material introduced to the vessel; “: The interior of the vessel includes six wings (wings 22-27) that are mounted onto the shaft and are attached to the shaft by a screw connection (connection 29; page 3 lines 4-6 & 10-11). Also, a number of stationary agitators (agitators 39) are mounted on the sidewall (wall 11) and project radially from the inside surface and into the vessel and is located above the rotating wings (vessel 10; page 4 lines 12-15). The wings and agitators co-operate in order to prevent the formation of lumps and clods within the vessel and can therefore "shred" the compost (page 6 lines 10-14).

“wherein said size reduction means divides the interior vessel space into first and second regions and defines a zone of size reduction through which waste material must pass as it passes through the vessel;”: As can be seen from Figure 1 of Franzen, the wings and agitators divide the interior of the vessel into “zones”.

“said size reduction means comprising one or more cantilevered bars, blades or cutting plates rigidly mounted on said rotatable shaft and rotatable with said shaft, and one or more fixed bars, blades or cutting plates mounted on and

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extending from said side wall(s), “: As discussed, the wings or blades are mounted on the rotatable shaft and includes agitators or fixed bars that extend from the sidewall.

“wherein said rotatable and fixed bars, blades or cutting plates overlap and co-operate together to create a shearing action so as to reduce the size of the waste material as said waste material passes through said size reduction means;”:

Also, from Figure 1, the wings and agitators overlap and do co-operate to break up clumps within the vessel. Furthermore, the wings and agitators are fully capable of creating a shearing action within the vessel.

“a loading port through which waste material may be introduced to said first region of the vessel;”: Franzen discloses an inlet unit (unit 44) with a lid (lid 46) that is connected to the inlet opening (inlet 43; page 4 lines 23-26).

“a discharge port through which waste material may be removed from the second region of the vessel;”: Franzen further includes a discharge pipe (pipe 68) or port allows for the removal of the waste which has since been converted to humus (page 7 lines 22-26).

“a source of oxygen for maintaining conditions within said vessel suitable for the aerobic composting of said waste material;”: Further, a fan (fan 32) is used to take in air from the surroundings and supplies this air under pressure to the shaft (shaft 16) where the shaft delivers this air to the nozzles (nozzles 30) at the bottom of the vessel (page 3 lines 27-28 and page 4 lines 5-7).

“wherein, when the apparatus is in use, waste material introduced to said vessel

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moves from said first region through the size reduction means to said second region.”: Finally, the composted waste within the vessel of Franzen moves from the inlet and past the wings and agitators to the outlet pipe and therefore, Franzen meets this limitation.

However, Franzen differs from claim 154 in that the wings attached to the rotating shaft are not blades.

33. Peguy discloses a mill used to crush and mix domestic garbage that includes for claim 154 movable knives (knives 14) that are mounted to a rotating shaft (shaft 3) that are teamed with parallel knives (knives 19) within the interior of the mill. During operation, the movable blades rotate and material is introduced into the interior by a chute (chute 18). The material is struck by the movable knives (knives 14) and sheared by the fixed knives (knives 19; paragraph 21 of translation). This serves to mix and crush the organic material.

34. Peguy demonstrates that using the combination of movable and fixed blades to shear compost was an art recognized means for achieving this goal at the time of the instant application. Further, it would have been obvious for one of ordinary skill in the art to employ the blades suggested by Peguy within the compostor of Franzen in order to obtain the predictable result of mixing and crushing or grinding the compost. The suggestion for doing so at the time would have been in order to transform domestic garbage into humus or compost (paragraph 4 of translation).

35. With regards to the limitations of claim 155 and 157, the shaft of Franzen is attached at the opposing end walls of the compostor (Fig. 1).

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36. With regards to claims 153 and 156, Franzen differs from the claim in that the stationary agitators do not extend across the width of the compostor.

37. Peguy discloses a mill used to crush and mix domestic garbage that includes for claims 153 and 156 movable knives (knives 14) that are mounted to a rotating shaft (shaft 3) that are teamed with parallel knives (knives 19) within the interior of the mill. During operation, the movable blades rotate and material is introduced into the interior by a chute (chute 18). The material is struck by the movable knives (knives 14) and sheared by the fixed knives (knives 19; paragraph 21 of translation). This serves to mix and crush the organic material.

38. Peguy demonstrates that using the combination of movable and fixed blades to shear compost was an art recognized means for achieving this goal at the time of the instant application. Further, it would have been obvious for one of ordinary skill in the art to employ the blades suggested by Peguy within the compostor of Franzen in order to obtain the predictable result of mixing and crushing or grinding the compost. The suggestion for doing so at the time would have been in order to transform domestic garbage into humus or compost (paragraph 4 of translation).

39. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included) as applied above and in further view of Suzuki et al. (US 2002/0096459 A1).

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40. Franzen differs from claim 67 in that the material used for the inside lining is not disclosed. Peguy discloses using anti-wear plates (plates 21; paragraph 22 of translation), but does not specify the material that composes these plates.

41. Suzuki teaches a garbage treatment vessel where the garbage is stored within the vessel and agitated by a propeller unit. For claim 67, Suzuki teaches that the container is made of stainless steel ([0016]). The corrosion resistant properties of stainless steel are known within the art hence the use of stainless steel in food grade containers and for chemical storage. Further, it would be obvious to one of ordinary skill in the art to employ a stainless steel container as suggested by Suzuki in order to prevent corrosion within the container of Franzen and Peguy.

42. Claims 69-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included) as applied above and in further view of Chen et al. (US 2002/0090718 A1).

43. Franzen and Peguy differ from claims from 69-71 in that both compostors are used for processing large volumes of waste, but the references do not specify a specific volume.

44. Chen teaches a composting and homogenizing organic material. For claims 69-71, Chen teaches a small to medium composter with a volume of 200 - 4000 liters which is the equivalent of 0.2 - 4 m³ ([0019]). This range anticipates the volumes for the composter being less than 8 m³, having a range of 1.5 m³ to 5.0 m³ and a range of 2.0 m³ to 3.0 m³. The sizing of the composter depends on the amount of raw material to be

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composted and expected throughputs of material. It would be obvious to one of ordinary skill in the art to employ the volumes suggested by Chen in order to have a composter with enough volume for the garbage of Franzen and Peguy. The suggestion for doing so at the time would have been to modify the volume of the composter based on consumer demand ([0049]).

45. Claims 80, 82 and 98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included) as applied above and in further view of Ueda (US 6,702,210 B1).

46. Franzen and Peguy are silent regarding a discharge on the bottom side wall of the composter adjacent to the bottom of the composter.

47. Ueda teaches a garbage disposing unit that includes internal blades for the mixing and grinding of garbage. With regards to claim 80, Ueda teaches that a raw garbage entrance (10e) that has a cover (10d) which is adjacent to the sidewall of the composter (10a). For claim 82, a discharge port (19) is located at the bottom side wall (10b) for the removal of compost. The use of a top lid and a bottom discharge allows for the continuous addition and removal of garbage from the composter. Therefore, it would be obvious to one of ordinary skill in the art to employ the loading lid and discharge port as suggested by Ueda in order to simultaneously load and remove compost from the device of Franzen and Peguy.

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48. Franzen discloses using sensors to monitor the temperature of the incoming air, but differs from claim 98 which requires the sensors within the interior of the composter. Peguy is silent regarding temperature sensors.

49. With regards to claim 98, Ueda teaches multiple temperature sensors (16) within the interior of the composter. The use of multiple temperature sensors placed throughout the composter would allow the skilled artisan to monitor the temperature at different levels within the composter and make adjustments as needed in order to maintain the temperature at a specific set-point. Therefore, it would be obvious to one of ordinary skill in the art to employ the sensors as suggested by Ueda in order to monitor the temperature within the composter of Franzen and Peguy. The suggestion for doing so at the time of the invention would have been in order to control the rate of fermentation within the tank.

50. Claim 87 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included) as applied above and in further view of Vanderwal (US 6,139,793).

51. Franzen discloses that the motor rotates at a speed of 2 to 6 rpm, but differs from claim 87 where the shaft rotates at a speed of 10 to 30 rpm. Peguy is silent regarding the speed at which the shaft rotates.

52. Vanderwal teaches a waste treatment control system that includes a pressure vessel with a rotating shaft. For claim 87, Vanderwal teaches that the rpm speed of the shaft (20) is from about 5 to 50 rpm which reads on the shaft speed being less than 60

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rpm and within the range of 10 to 30 rpm (col. 4 lines 59-61). Therefore, it would be obvious to one of ordinary skill in the art to employ the shaft speed of Vanderwal in order to properly mix and grind the garbage of Franzen and Peguy. The suggestion for doing so at the time would have been to allow portions of the waste to contact the walls of the vessel in order to heat the garbage in a substantially uniform manner (col. 4 lines 61-63).

53. Claims 99-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included) as applied above and in further view of Goldfarb (US 5,258,306).

54. Franzen and Peguy are silent regarding the limitations of 99-101.

55. For claim 99, Goldfarb teaches air is supplied to the system by compressed air or outside fan blowers (col. 4 lines 56-59). It would be within the skills of one of ordinary skill in the art to employ an air compressor as the air supply instead of fans. For claim 100, the sensors of Goldfarb monitor the temperature, moisture and air flow through the composter by being connected to a computer (col. 5 lines 24-26). Furthermore, the computer is fully capable of controlling the air flow to induce biological activity or remove excess heat from the composter. Therefore, it would be obvious to one of ordinary skill in the art to employ a source of forced air as suggested by Goldfarb in order to supply air to the composter of Franzen and Peguy. The suggestion for doing so at the time would have been in order to regulate and control the fermentation process.

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56. With regards to claim 100, Franzen discloses temperature sensors and a heating element used to control the temperature of the incoming air and is fully capable of providing a source of oxygen to maintain the temperature within the composter if the temperature drops below a first or second set point.

57. With regards to claim 101, both Franzen, Peguy and Goldfarb are silent regarding the exact placement (range) of the temperature sensor above the lower end of the composter. However, monitoring the temperature of the compost within the device is known within the art and using multiple sensors throughout the composter to monitor the temperature gradient within the composter is also known within the art. Therefore, it would be obvious to one of ordinary skill in the art to place the temperature sensor close to the bottom of the composter of Franzen, Peguy and Goldfarb in order to monitor and control the temperature of the compost. Refer to § MPEP 2144.04 VI C.

58. Claim 102 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included) as applied above and in further view of Warrington (US 5,185,261)

59. While Franzen discloses air nozzles at the bottom of the composter, claim 102 differs from Franzen and Peguy in that the nozzles are located on the sidewall.

60. Warrington discloses a twin-unit composting apparatus that for claim 102 includes air access means (vents 40) or air inlets which are at the base of the composter (col. 5 lines 57-60). This results in an upward flow of air through the composter. Here, Warrington demonstrates that the placement of the nozzles, either at

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the bottom of the compostor or on the side wall, is a conventional orientation that allows for air to flow up into the compostor that draws moisture from the compost helping to keep the material dry (col. 6 lines 14-16). Therefore, it would have been obvious for one of ordinary skill in the art to employ the location of the vents as suggested by Warrington with the compostor of Franzen and Peguy in order to provide air into the interior of the compostor. The suggestion for doing so at the time would have been in order to air is drawn in without the egress of objectionable odors (col. 5 lines 60-62).

61. Claim 103 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included) as applied above and in further view of Greeb (US 5,234,596).

62. Franzen and Peguy differ from claim 103 in that the location of the nozzles are not in the end wall of the compostor or around a basal bearing.

63. Greeb teaches a device for composting organic material where that material is fed into the top of the compostor and discharged from a bottom port. For claim 103, Greeb teaches an air-distributing device at the bottom of the device for aeration of the compost. The air flow counter-currently through the debris mixing and aerating the compost (col. 3 lines 23-26). It would be obvious to one of ordinary skill in the art to employ the air-distributing device as suggested by Greeb in order to aerate and mix the compost of Franzen and Peguy. The suggestion for doing so at the time would have been in order to supply air for the composting of the raw garbage within the device.

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64. Claim 105 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franzen et al. (WO 00/02832) in view of Peguy (FR 2 597 764 A1) (machine translation included) as applied above and in further view of Tsuchida (US 5,534,042).

65. Franzen and Peguy differ from claim 105 in that they do not specifically disclose a bio-filtration or odor treatment.

66. Tsuchida discloses a composting device that includes a gas inlet and a gas outlet that for claim 105 is connected to a deodorizing unit (unit 18) via a reserve water tank (tank 12; col. 6 lines 3-7). This deodorizing unit (unit 18) includes an absorbing agent that is used to filter any excessive gas (col. 7 lines 15-18). Tsuchida, therefore, discloses a deodorizing unit that solves the same problem as the instant application by using a conventional odor control filter (unit 18). Therefore, it would have been obvious for one of ordinary skill in the art to employ the deodorizing unit suggested by Tsuchida within the compostor of Franzen and Peguy in order to obtain the predictable result of reducing the unpleasant smell from the composting process.

Response to Arguments

67. Applicant's arguments with respect to claims 66-71, 73-90, 92-105 and 153-157 have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejection are in view of Franzen and Peguy which disclose a compostor using wings or blades to mix and grind organic material.

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Conclusion

68. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL HOBBS whose telephone number is (571)270-3724. The examiner can normally be reached on Monday-Thursday 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Marcheschi can be reached on (571) 272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/M. H./

Examiner, Art Unit 1797

/Michael A Marcheschi/

Supervisory Patent Examiner, Art Unit 1797